



USGS National Land Imaging Program Update

NGAC

8 September 2022

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Landsat Operations Status

Landsat 9 (2021 -)

Collecting more than 700 new scenes per day; full mission transitioned to USGS in August

Landsat 8 (2013 -)

Collecting more than 700 new scenes per day; night and off-nadir imaging of volcanos and fire imaging.

Landsat 7 (1999 - 2022)

Recently lowered into storage orbit; awaiting NASA satellite rendezvous and refueling; still collecting new imagery



Earth Resources Observation and Science Center (EROS)

Landsat Archive Operations

Reprocessed Landsat "Collection 2" available on the Amazon Cloud.

On track for more than **3 billion** user accesses this year!

Landsat Next Requirements Meet Emerging Needs While Ensuring Continuity

Multi-spectral → Super-spectral

User need surveys provided a clear set of priorities for Landsat Next requirements to meet emerging needs at breakthrough effectiveness:

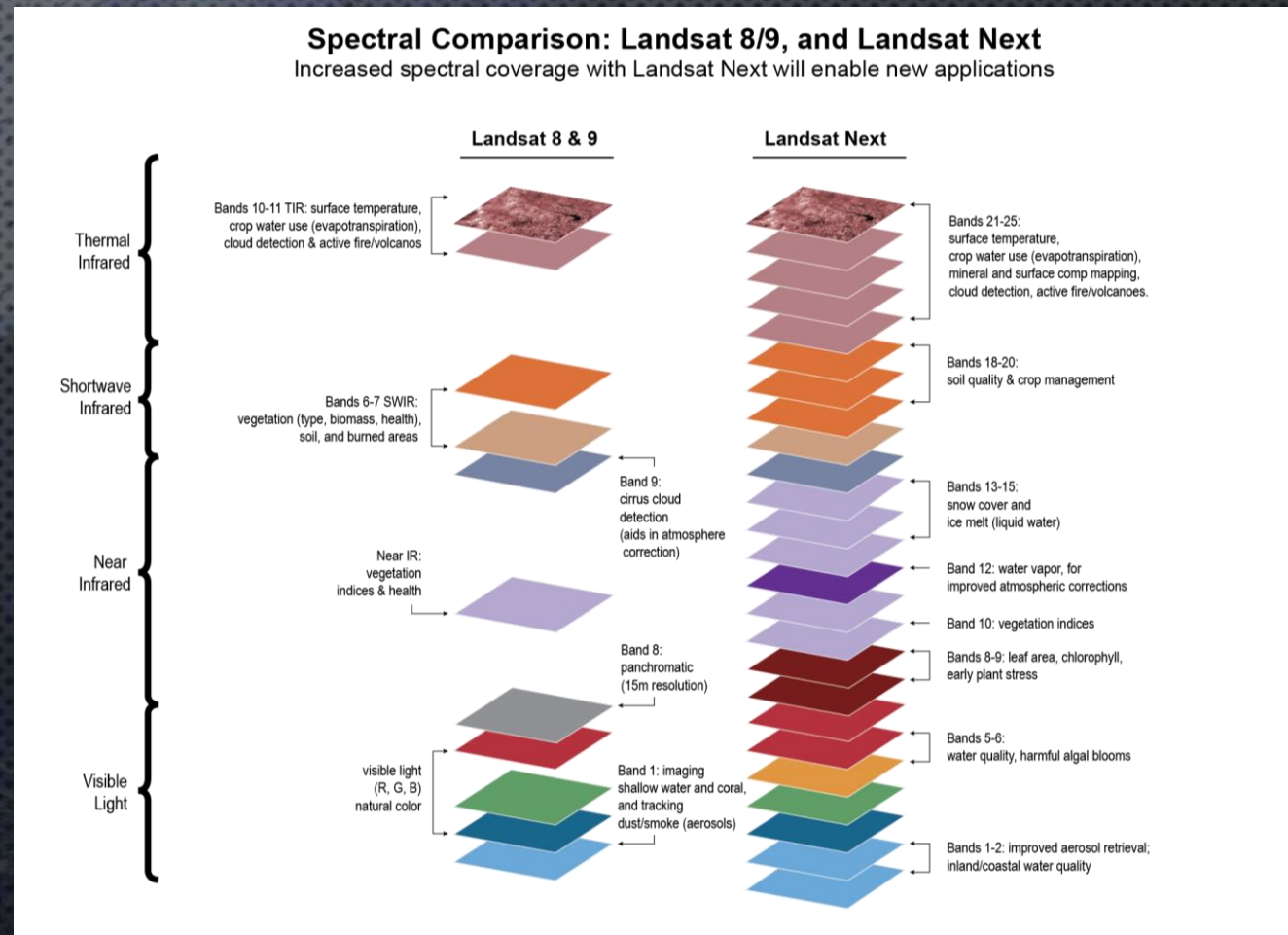
Improved Revisit Frequency for monitoring dynamic land and water phenomena (crop health & productivity, water use/quality, coastal/wetland change, snow/ice state, wildfire) which require ~ weekly clear views.

Higher Spatial Resolution for monitoring small agricultural fields, ecosystem monitoring, forest disturbance, urbanization, and other applications.

Additional spectral bands to support emerging applications in water quality, snow hydrology, soil mapping, geology, agricultural applications, and other areas.

Synergy with Sentinel-2 bands to allow easier merging of information products.

Sustained geometric and radiometric quality established by Landsat 8/9.



Landsat Next will provide more than twice as many spectral bands, with resolution improved by a factor of 2, and an improved revisit frequency over Landsat 8/9

LANDSAT NEXT CURRENT AND NEAR-TERM ACTIVITIES

- **NASA and USGS are working together to determine the Landsat Next mission concept**
 - NASA/USGS initiated Landsat Next Project Teams in April 2020
 - Three Requests for Information released (Science Requirements/instrument concept/mission architecture, Instrument, Payload Interface/Data Storage)
 - Multiple space architectures considered
 - Ground system studies and architecture trades in progress
- **Project teams' recommended mission concept approved by Sustainable Land Imaging Joint Steering Group in February and by NASA Mission Concept Review panel in March**
- **However, OMB concerns expressed in a late March briefing have led to a delay in the project**
- **Key Decision Point A for approval to proceed into NASA Phase A (Concept and Technology Development) still expected in 2022**
- **Target Launch Readiness Date: 2029/2030**



LANDSAT 50th ANNIVERSARY YEAR EVENTS

Year-Long Activities

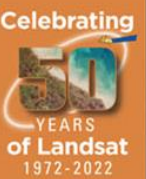
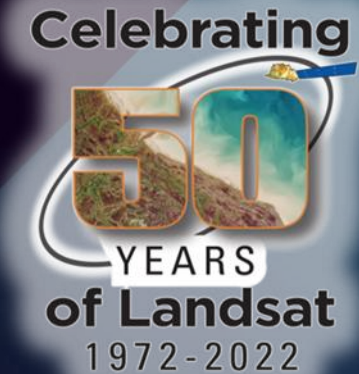
- Landsat and Social Media Products branded with 50th Anniversary Graphic
- Completion of all Landsat State Fact Sheets and State Mosaics

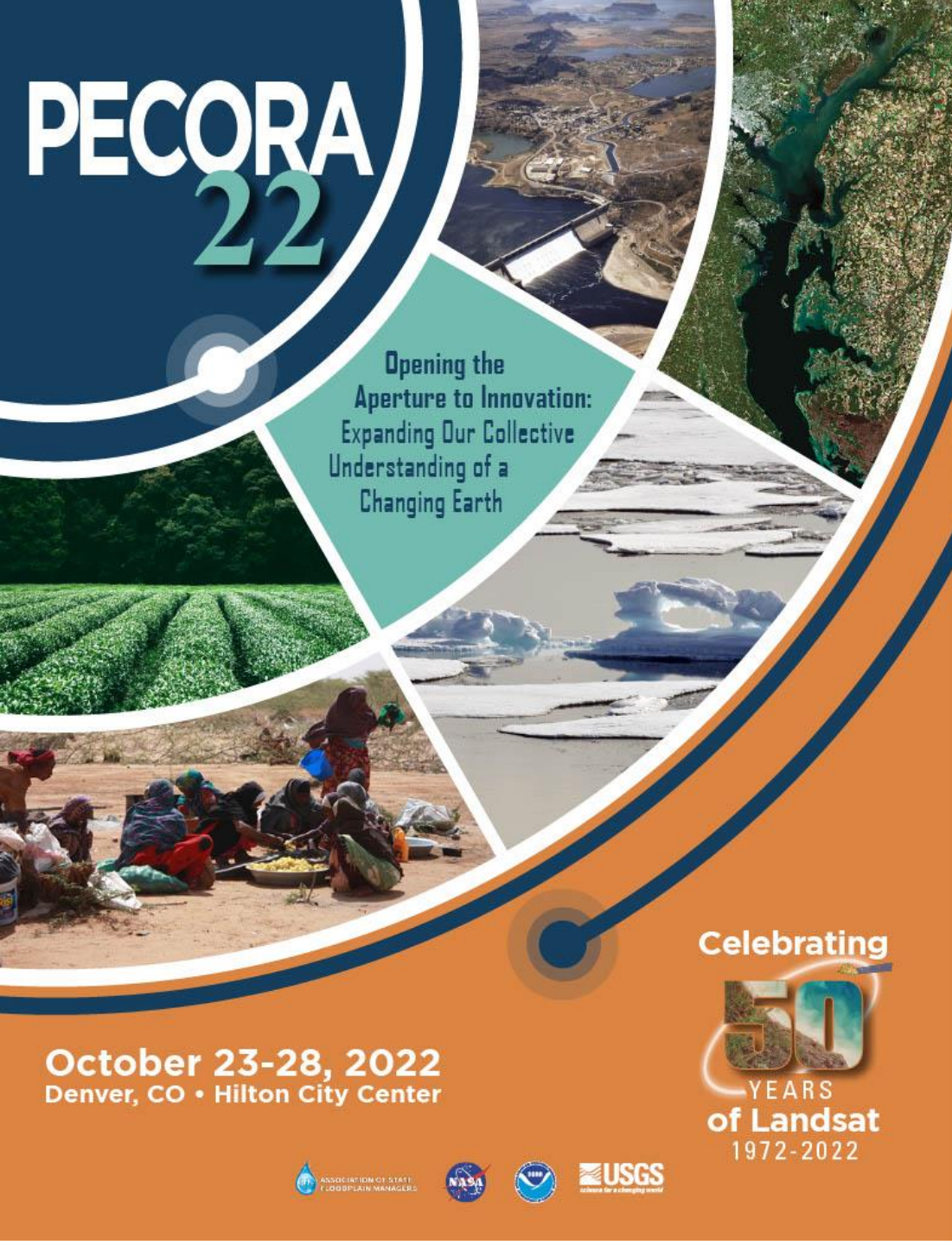
July

- Esri User Conference: July 11–15, 2022 – San Diego, CA – Map Gallery Exhibit
- July Photogrammetric Engineering & Remote Sensing Journal Cover story on Landsat's 50th Anniversary
- NASA Goddard Visitor Center Landsat 50th Anniversary public event - July 20
- **Landsat 50th Anniversary Events on Capitol Hill – July 21**
 - Lunch and Learn (Panel Session) – Virtual
 - Evening Reception – House Science Committee Hearing Room
 - Resolution of Congress issued, in coordination with offices of Sen. Cardin (D-MD), Rep. Hoyer (D-MD)
- **Landsat 9 Transition Turnover Event – August 10-11 – EROS-Sioux Falls, SD**
 - Full 2-day schedule of events included tours and special communications products
- Planning exhibits in the National Air & Space Museum and Natural History Museum
- Developed 50th Anniversary articles for media and publications
- 50th Anniversary Video
- 50th Anniversary Poster

October

- Pecora-22: October 23 – 28, 2022 – Denver, CO (Theme 50th Anniversary Celebration)





Pecora-22: October 23-28, 2022

Denver, Colorado



- Flagship land-imaging satellite applications conference; longstanding USGS-NASA partnership
- Highlights Landsat's 50th anniversary
- Features Landsat 9, Landsat Next and the many innovative developments in government and commercial land-imaging programs
- **Secretary Haaland and NASA Administrator Nelson invited for Plenary & Evening Celebration on the 26th**
- Website: pecora22.org **REGISTER NOW!**